

Probe Science: When it has to be In-Situ

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Sometimes remote sensing just isn't enough. Some critical science questions can only (or at least best) be answered with in-situ observations. Also, in-situ measurements are often necessary to calibrate or verify remote observations. It is in these instances that planetary probes are necessary. There is little doubt that the measurements these probes provide are critical. However, in an age when the duration of most planetary missions is measured in years and the number of terabytes of data returned is seen as a measure of value and success, the relatively short life and low data volumes of a probe missions is sometimes seen as a discriminating disadvantage. This talk will review the scientific value of probe missions and how future probe missions are critical to addressing fundamental questions about our solar system.